



# EIN seminar: “Investing in Education and Innovation”

Miguel Ángel Sancho Gargallo

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**EFSE**

José Abascal, 57, 5º B 28003 Madrid  
T 91 455 15 76 F 91 399 40 12  
fundacion@sociedadyleducacion.org  
www.sociedadyleducacion.org

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THESSALONIKI, GREECE

# EFNE Introduction

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- Improving education is a key factor for personal and social development
- Knowledge-based economy
- From Lisbon strategy (2000-2010) to Europe 2020 strategy
- 2030 Agenda. Sustainable Development Goals (SDGs). Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

# EFNE Outline

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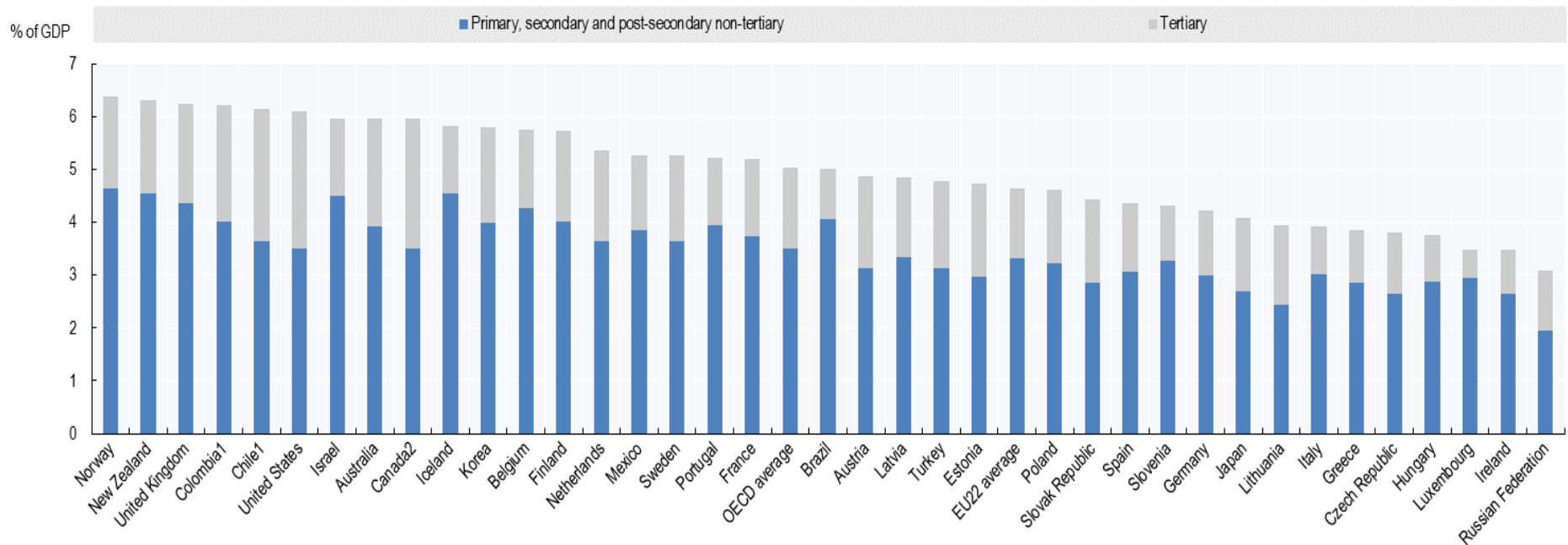
- I. How much is spent (or rather, invested) in education?
- II. Sources of investment in education: private and public.
- III. Where is education funding spent? On what resources and services?
- IV. Outputs and outcomes of investment in education: educational attainment and employment.



How much is spent  
in education?

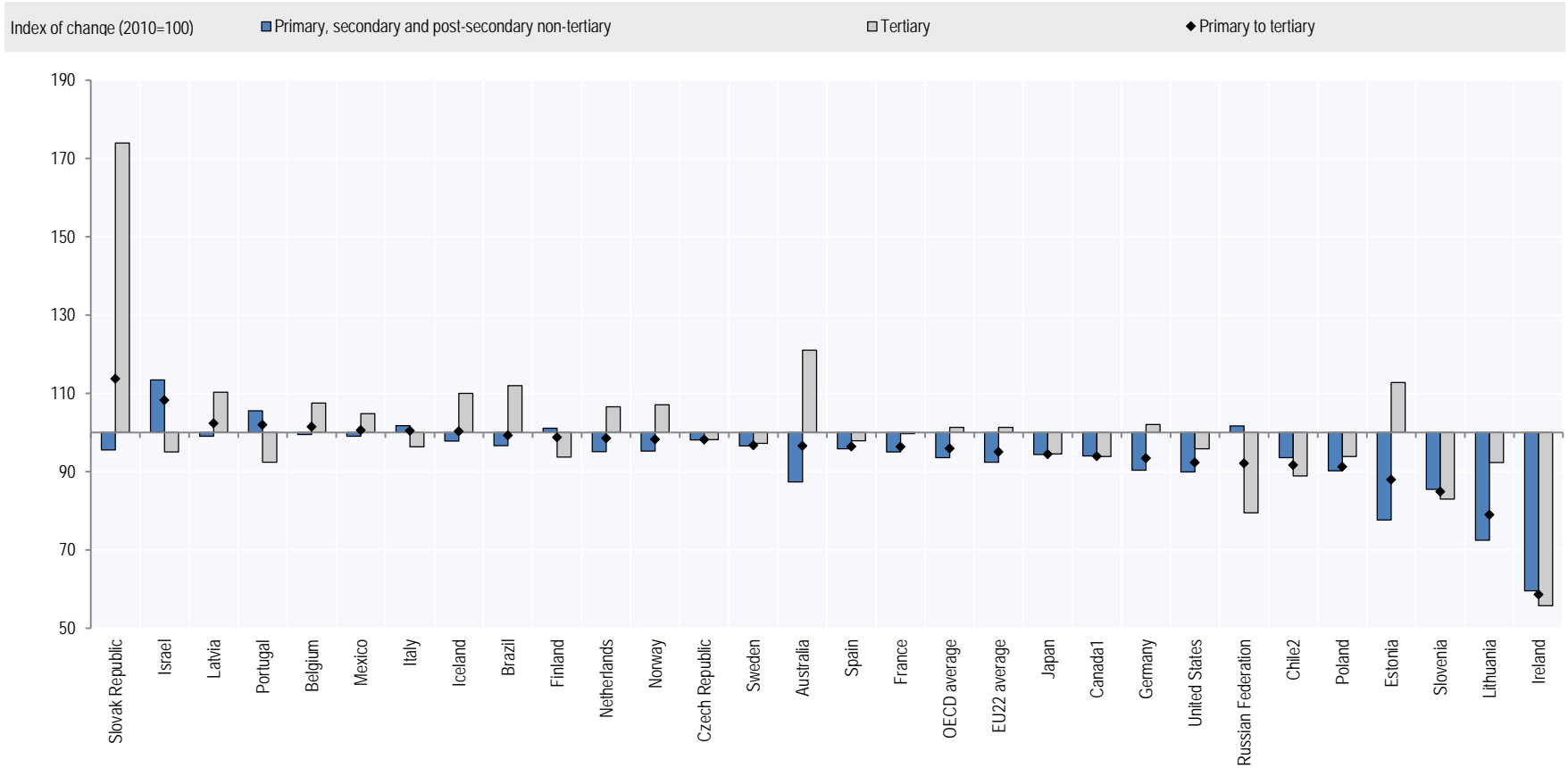
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# Total expenditure on educational institutions as a percentage of GDP (2015)



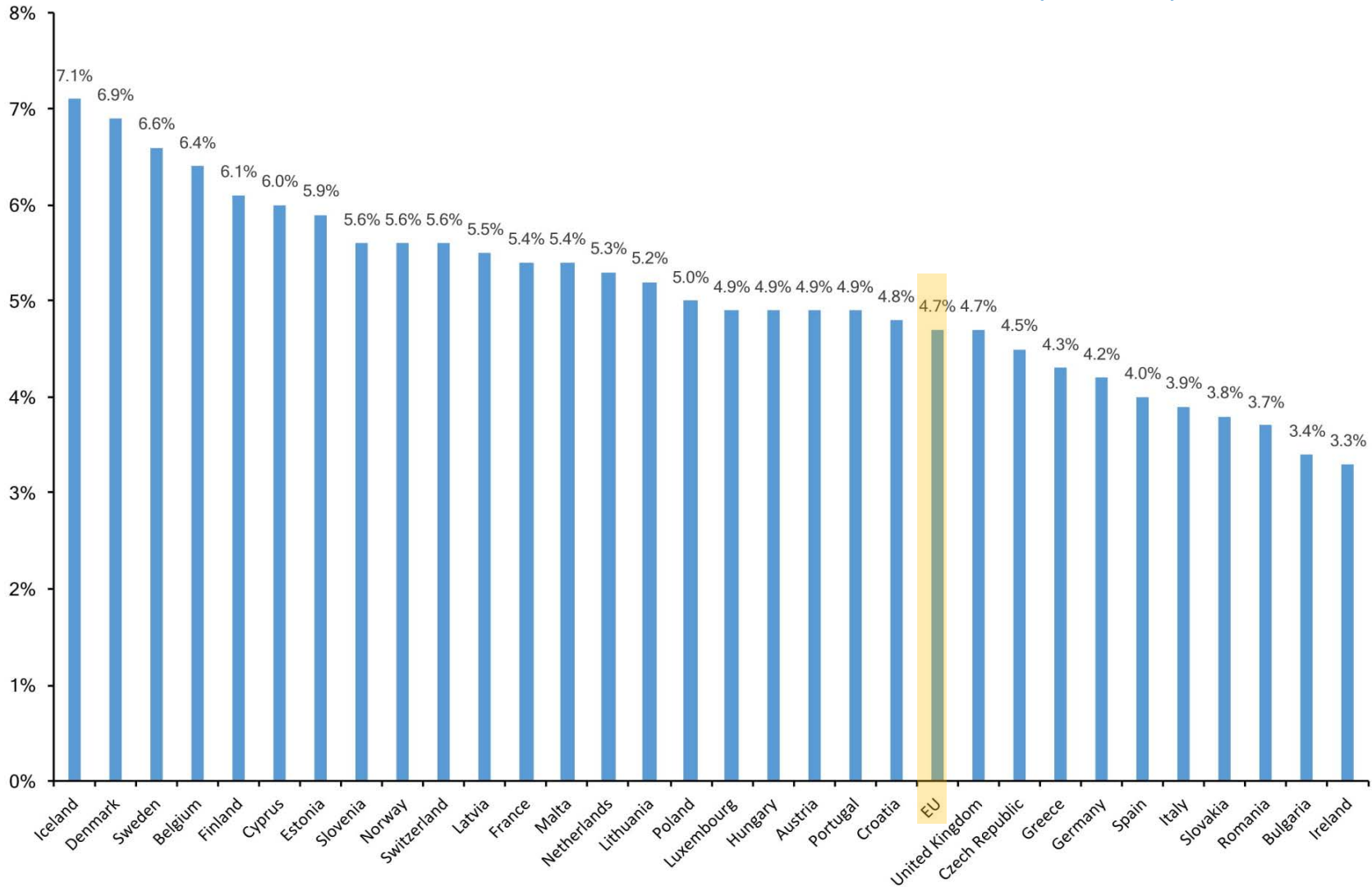
Source: OECD / UIS / Eurostat (2017), Table C2.1. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

# What proportion of national wealth is spent on educational institutions? Change in total expenditure on educational institutions as a percentage of GDP between 2010 and 2015



Source: OECD / UIS / Eurostat (2017), Table C2.3. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

# Percentage of public spending on education as share of GDP (2016)



# Public expenditure on education as a share of GDP (2012-2016)

Source: DG EAC, based on Eurostat's general government finance and national accounts statistics

Public expenditure on education as a share of GDP (%)					
Country	2012	2013	2014	2015	2016
European Union	5.0	4.9	4.9	4.8	4.7
Belgium	6.2	6.4	6.3	6.4	6.4
Bulgaria	3.3	3.7	4.1	4.0	3.4
Czech Republic	5.0	5.1	5.1	4.9	4.5
Denmark	7.0	6.9	7.1	7.0	6.9
Germany	4.2	4.3	4.2	4.2	4.2
Estonia	6.3	6.0	5.7	6.1	5.9
Ireland	4.9	4.7	4.3	3.3	3.3
Greece	4.5	4.6	4.3	4.3	4.3
Spain	4.2	4.1	4.1	4.1	4.0
France	5.5	5.5	5.5	5.5	5.4
Croatia	4.9	5.1	4.8	4.8	4.8
Italy	4.1	4.1	4.0	4.0	3.9
Cyprus	6.3	6.8	6.0	6.0	6.0
Latvia	5.7	5.7	5.9	5.9	5.5
Lithuania	5.8	5.6	5.4	5.4	5.2
Luxembourg	5.8	5.1	4.9	4.9	4.9
Hungary	4.7	4.6	5.1	5.1	4.9
Malta	5.8	5.8	5.6	5.5	5.4
Netherlands	5.5	5.4	5.4	5.3	5.3
Austria	5.0	5.0	4.9	4.9	4.9
Poland	5.4	5.3	5.3	5.3	5.0
Portugal	5.8	5.9	5.7	5.1	4.9
Romania	3.0	2.8	3.0	3.1	3.7
Slovenia	6.4	6.5	6.0	5.5	5.6
Slovakia	4.1	4.0	4.1	4.2	3.8
Finland	6.4	6.4	6.4	6.2	6.1
Sweden	6.5	6.6	6.6	6.5	6.6
United Kingdom	5.7	5.1	5.0	4.9	4.7
Iceland	:	7.5	7.6	7.4	7.1
Norway	4.9	4.9	5.1	5.5	5.6
Switzerland	5.5	5.5	5.5	5.6	5.6



# Public expenditure on education, real annual change (2012-2015)

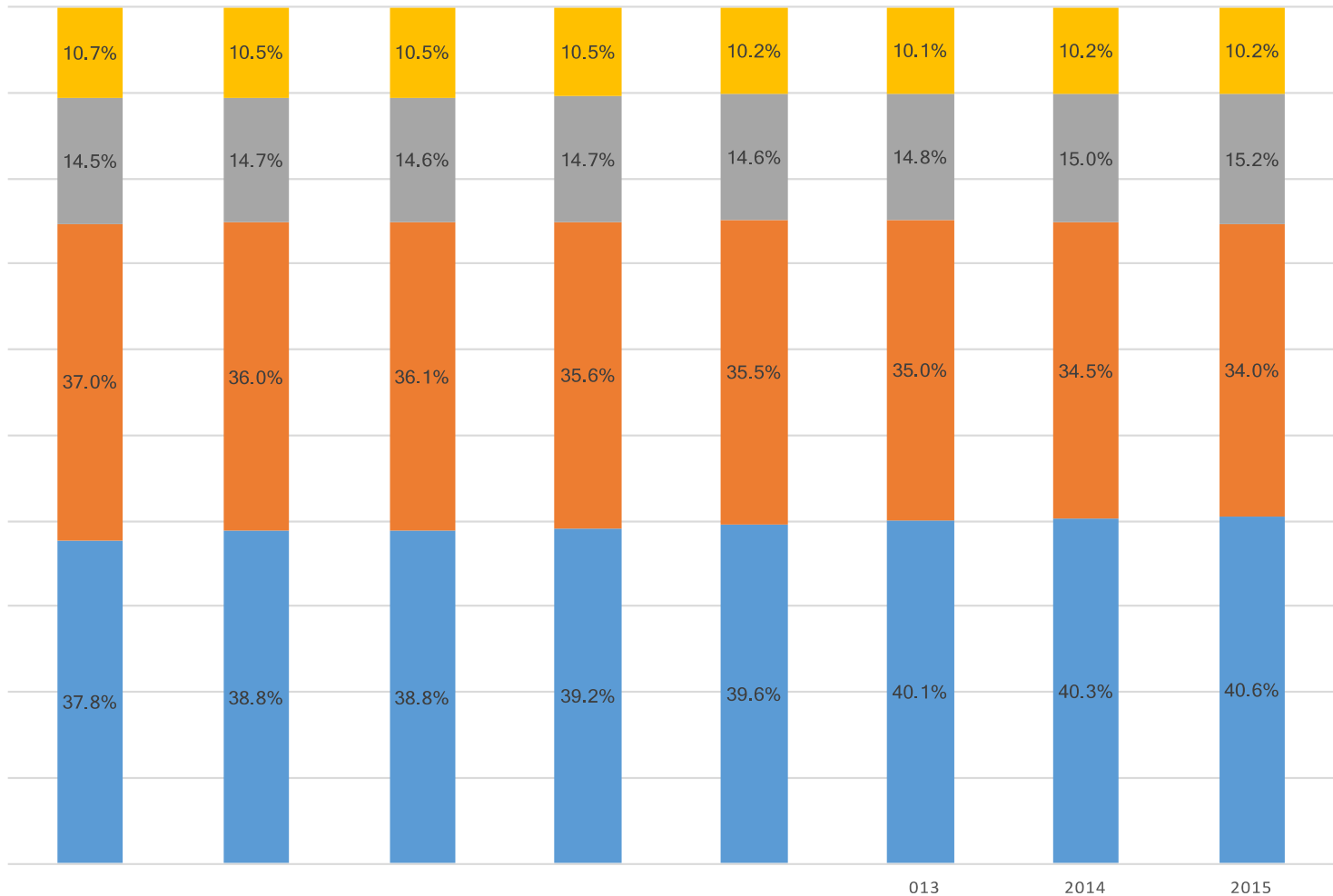
Source: EU Monitor 2017: DG EAC, based on Eurostat's general government finance and national accounts statistics (2018)

\* = year-on-year change of total expenditure of general government on education, valued at constant prices using the implicit deflator for the final consumption of the general government. Data for the Netherlands, Croatia, Finland, Spain and the EU are provisional

	Year-on-year real change*			
	2012	2013	2014	2015
<b>EU</b>	<b>-1.7</b>	<b>-0.6</b>	<b>1.6</b>	<b>1.0</b>
BE	0.6	1.6	1.8	3.0
BG	-3.1	3.3	12.0	3.2
CZ	-0.8	2.3	3.6	-0.9
DK	3.4	0.4	5.5	0.0
DE	-1.4	1.0	0.3	1.5
EE	5.4	-5.1	-5.0	5.6
IE	-4.4	-3.2	4.7	-0.6
EL	-3.8	0.4	-4.8	-0.4
ES	-6.3	-3.3	0.6	2.2
FR	0.9	0.9	1.1	1.2
HR	-1.7	4.8	-7.7	1.6
IT	-1.9	0.2	-0.3	-0.7
CY	-6.9	4.2	-10.8	1.2
LV	2.8	0.2	5.5	2.3
LT	1.8	0.3	-4.0	-1.9
LU	3.1	-3.4	2.6	1.3
HU	-5.9	3.7	14.0	2.3
MT	4.2	3.5	4.8	6.6
NL	-2.5	-1.5	0.5	3.6
AT	0.6	0.9	-0.7	1.2
PL	-0.7	-0.4	3.7	2.2
PT	-11.5	-4.0	-0.3	1.2
RO	-27.5	-5.7	9.0	5.6
SI	-1.2	2.3	-4.5	-5.0
SK	-0.9	-1.5	6.3	5.7
FI	-2.9	-1.1	-0.4	-0.9
SE	-0.4	0.3	2.3	2.5
UK	-2.3	-3.0	4.2	-1.8

# Public expenditure by government function. EU (2008-2015)

■ Social protection ■ Other ■ Health ■ Education



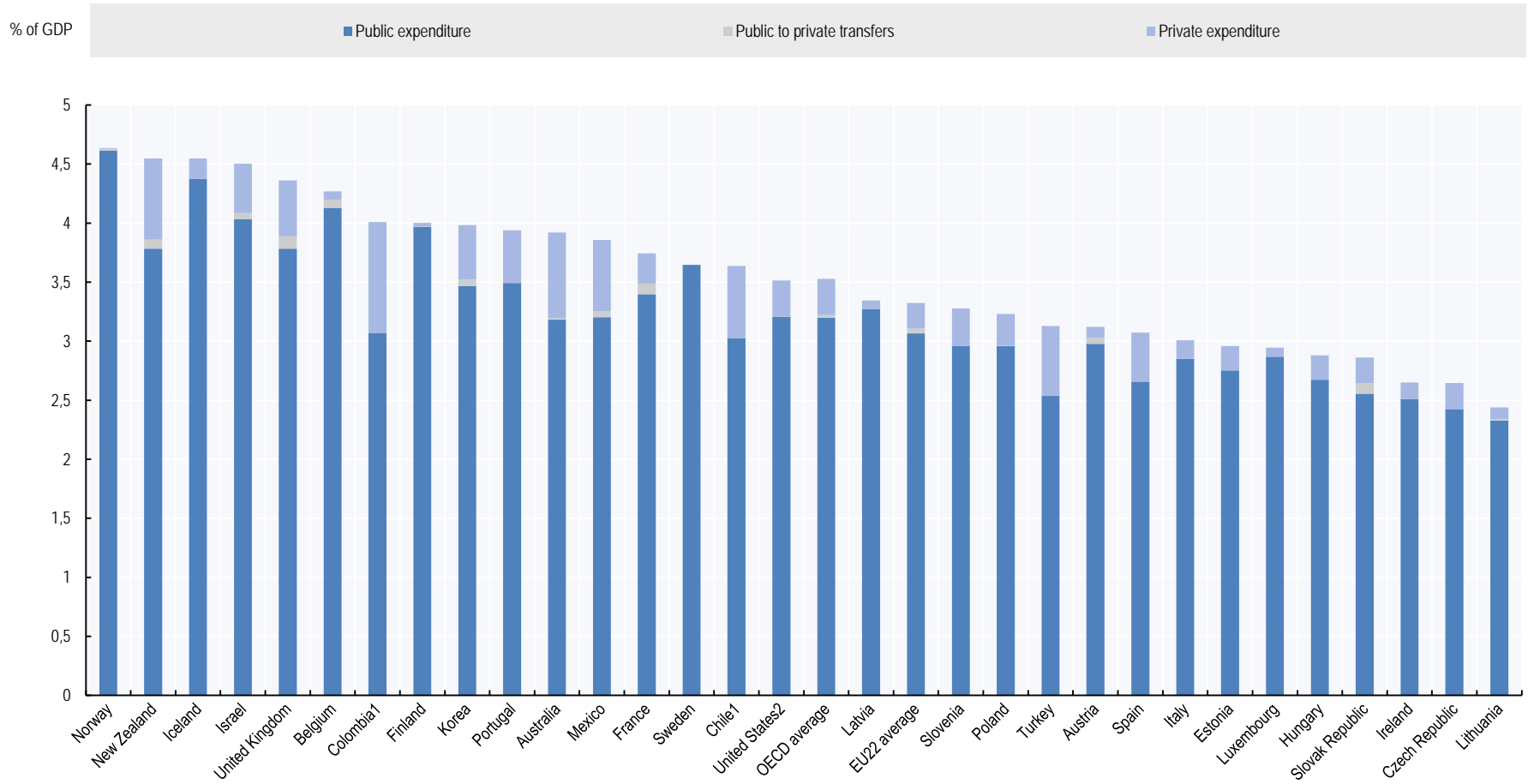


# Private and public sources of investment in education

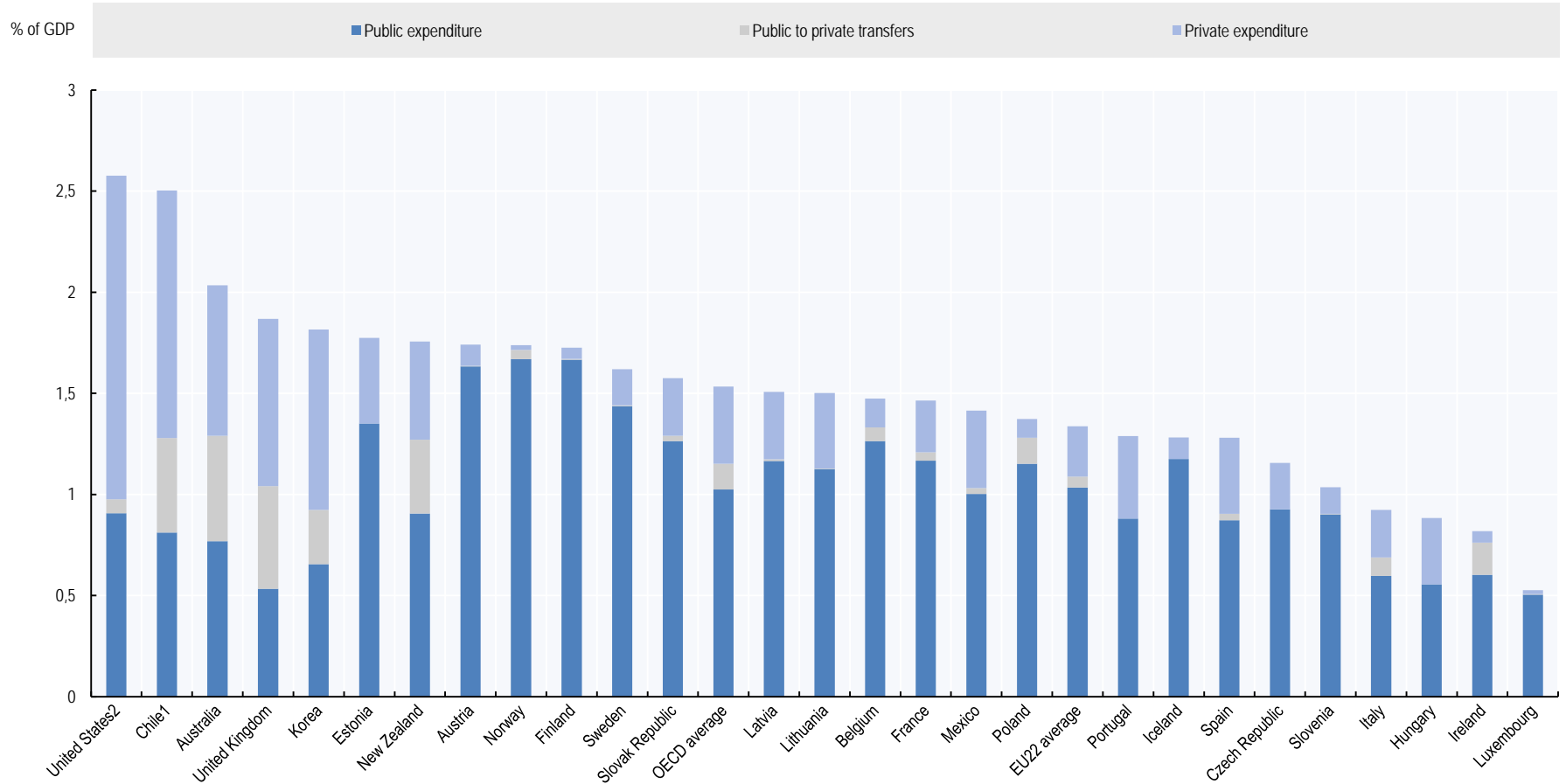
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# Total expenditure on educational institutions as a percentage of GDP, by source of funds (2015) - Primary, secondary, and post-secondary (non-tertiary) education



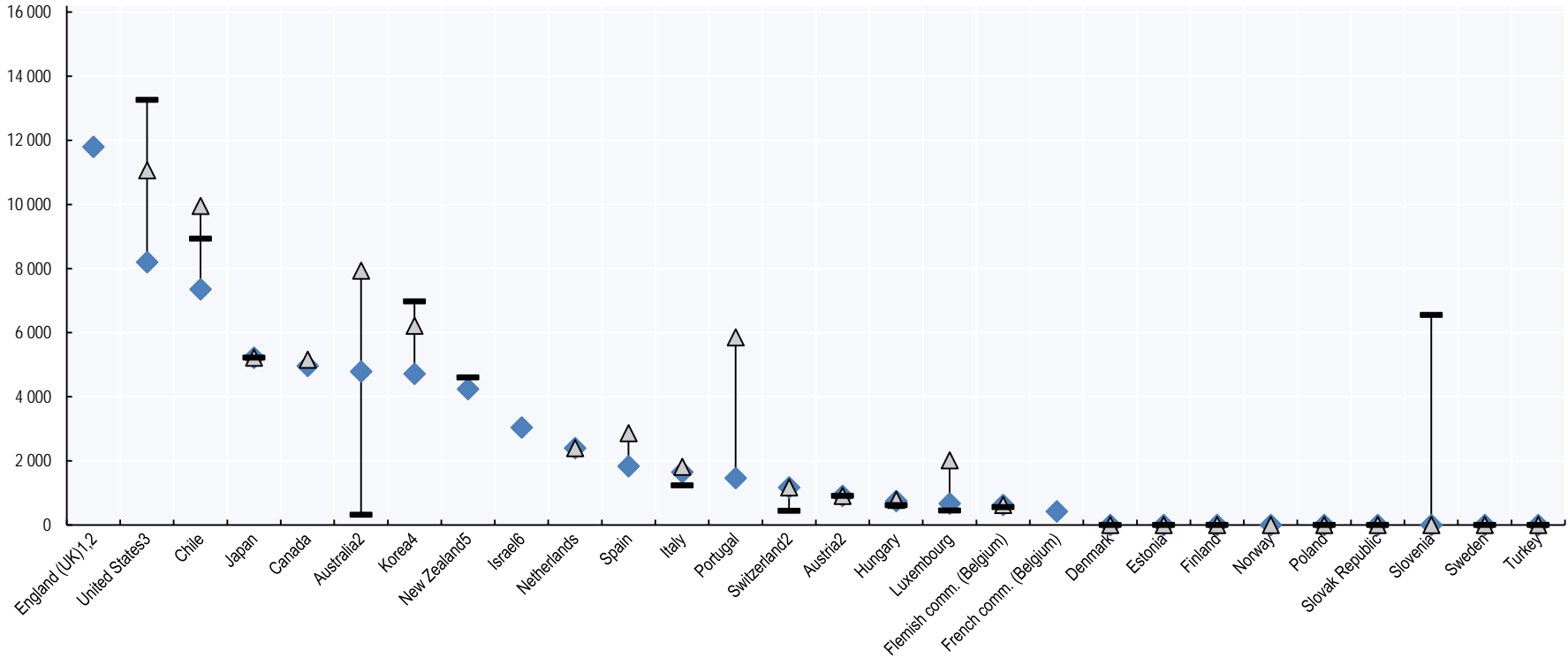
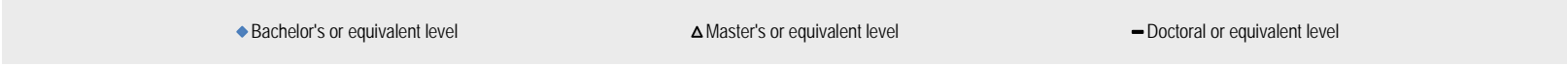
# Total expenditure on educational institutions as a percentage of GDP, by source of funds (2015) - Tertiary



Source: OECD / UIS / Eurostat (2017), Table C2.2. See Source section for more information and Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

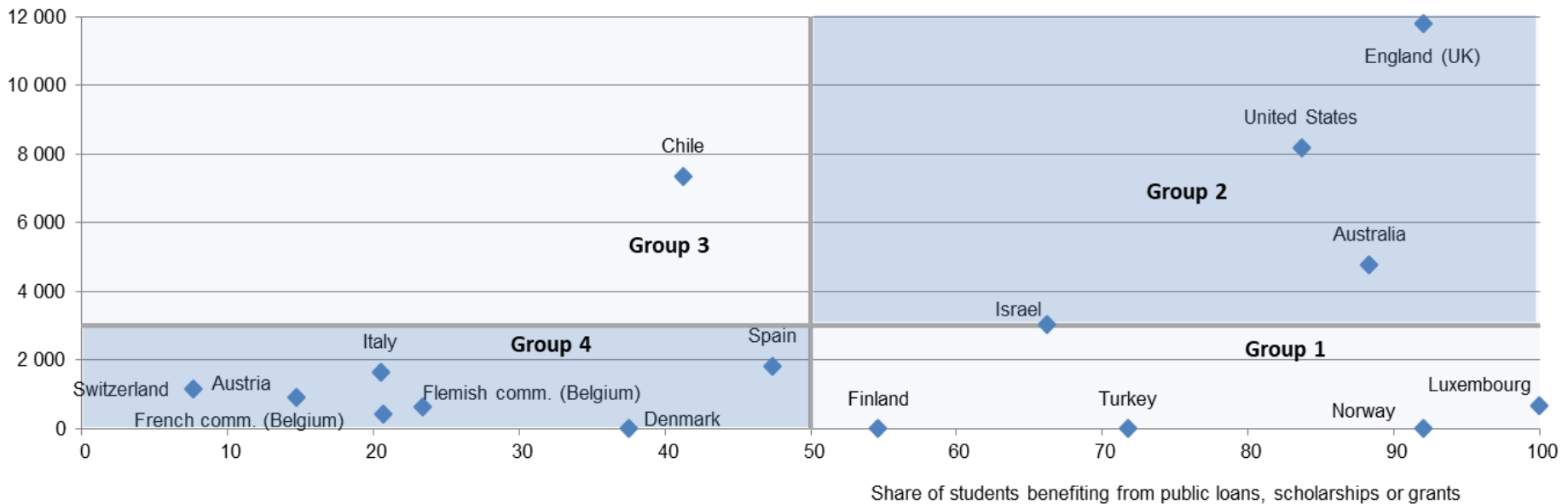
# Tuition fees charged by public tertiary educational institutions to national students, by level of education (2015/16)

USD converted using PPPs



# Tuition fees charged by public institutions related to the share of students benefiting from public loans, scholarships or grants, at bachelor's or equivalent level (2015/16)

Tuition fees charged by public institutions  
(USD converted using PPPs)



**Source:** OECD (2018), Table C5.1 and Table C5.5, available on line. See *Source* section at the end of this indicator for more information and Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

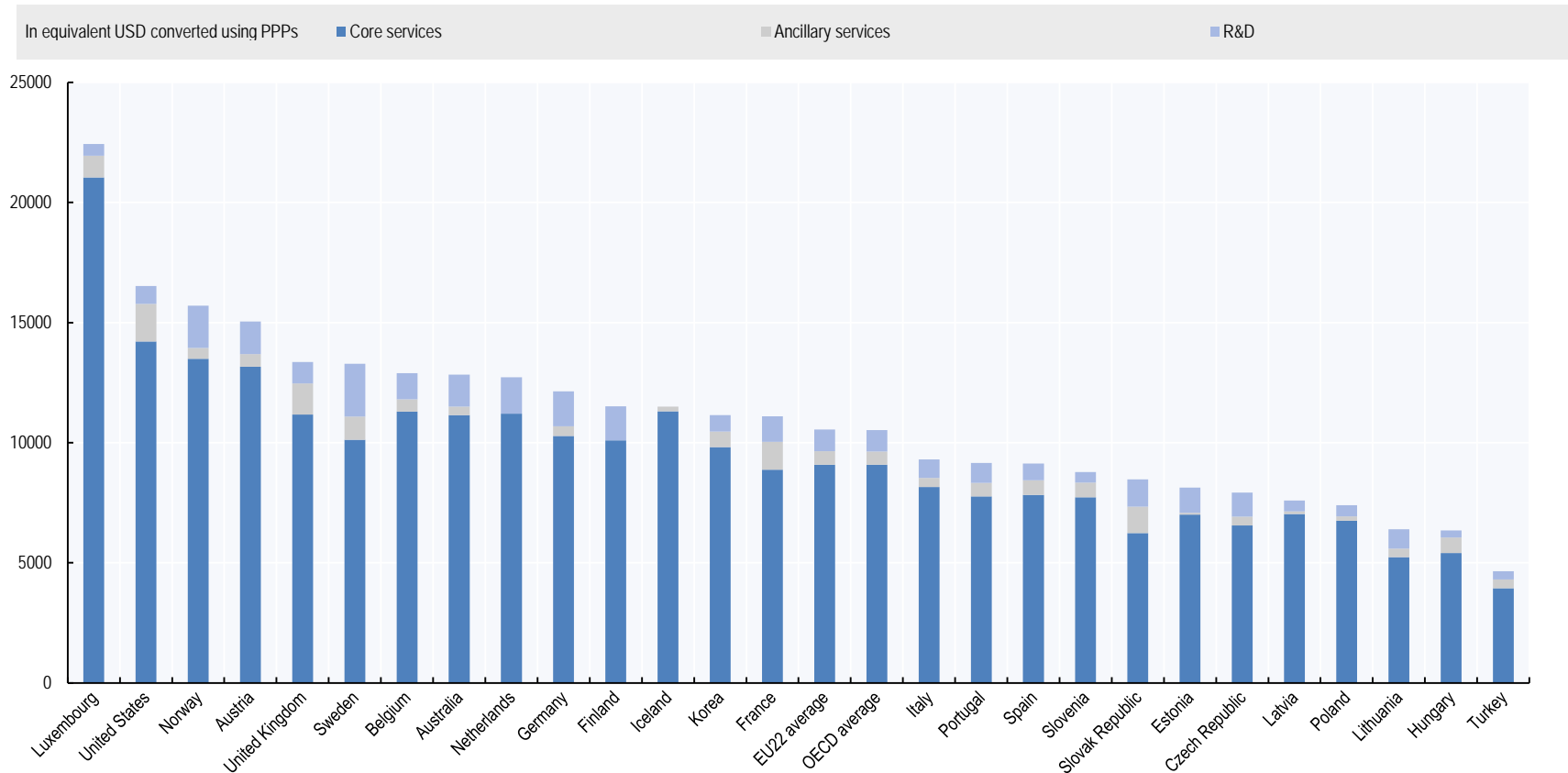


# Where is education funding spent?

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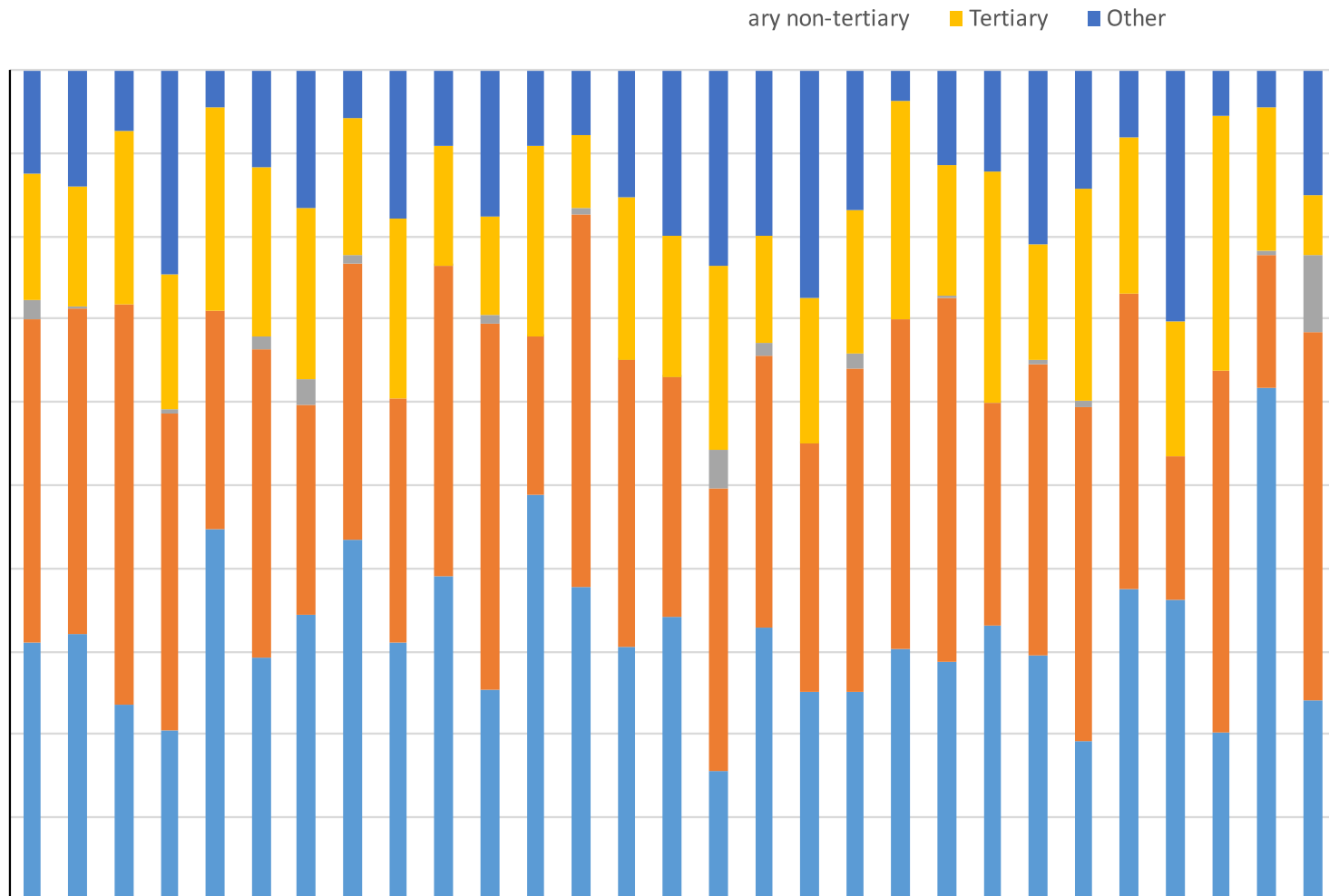


# Total expenditure on educational institutions per student, by type of service (2015)

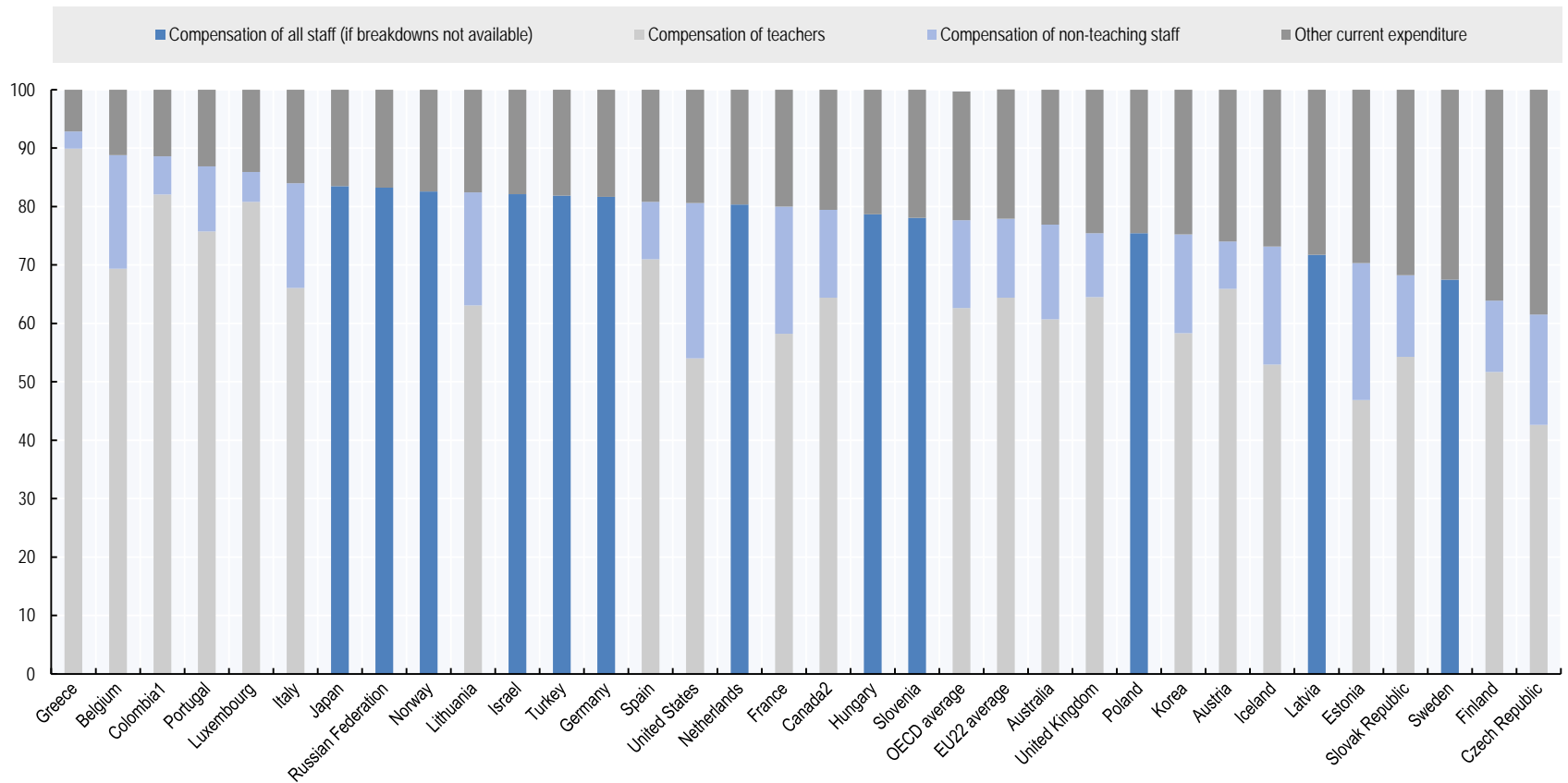


Source: OECD / UIS / Eurostat (2018), Table C1.2. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

# Public expenditure on education by level (2015)

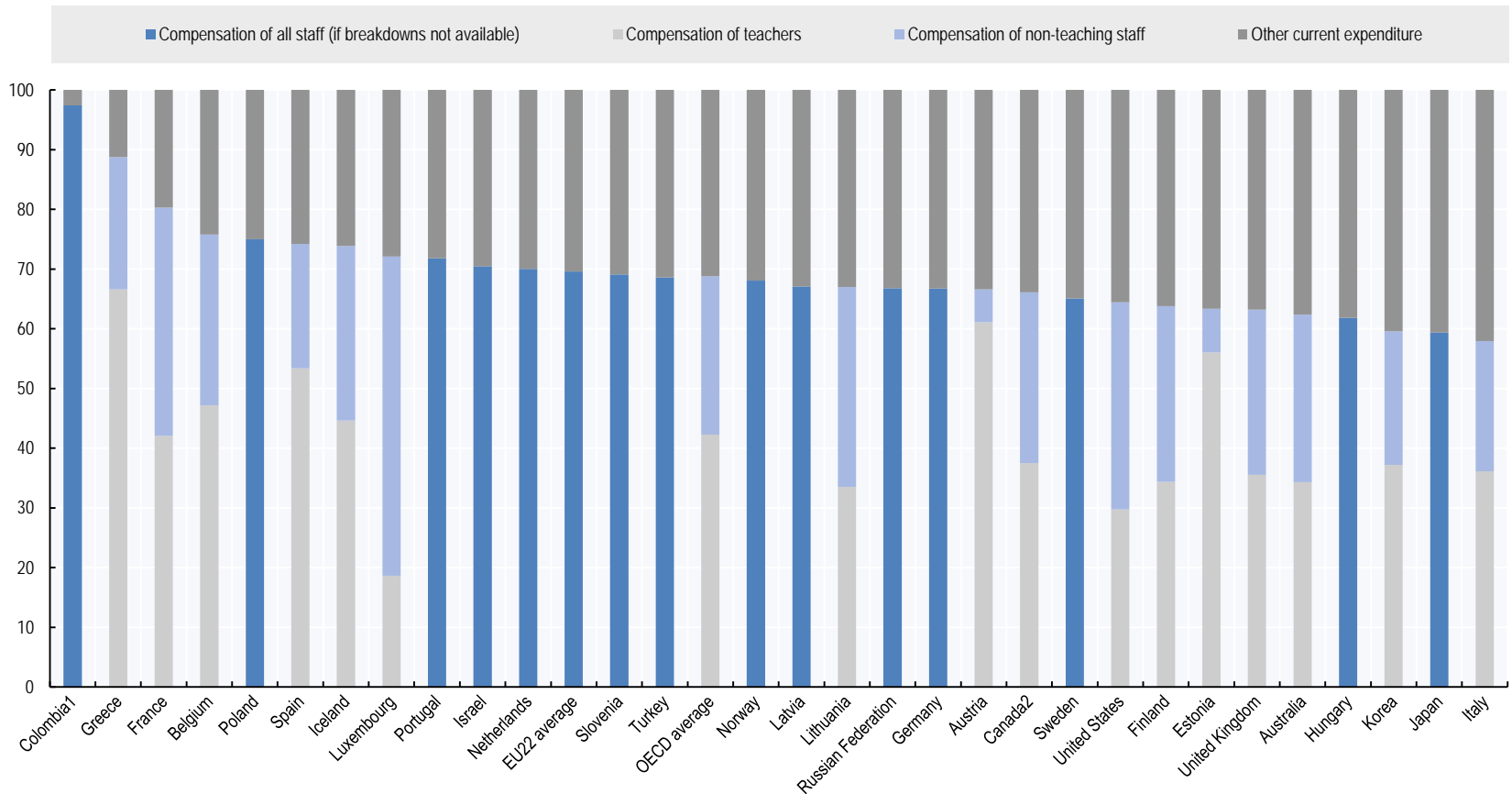


# Composition of current expenditure in public and private educational institutions (2015) - Primary, secondary and post-secondary (non-tertiary)



Source: OECD / UIS / Eurostat (2018), Table C6.2. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

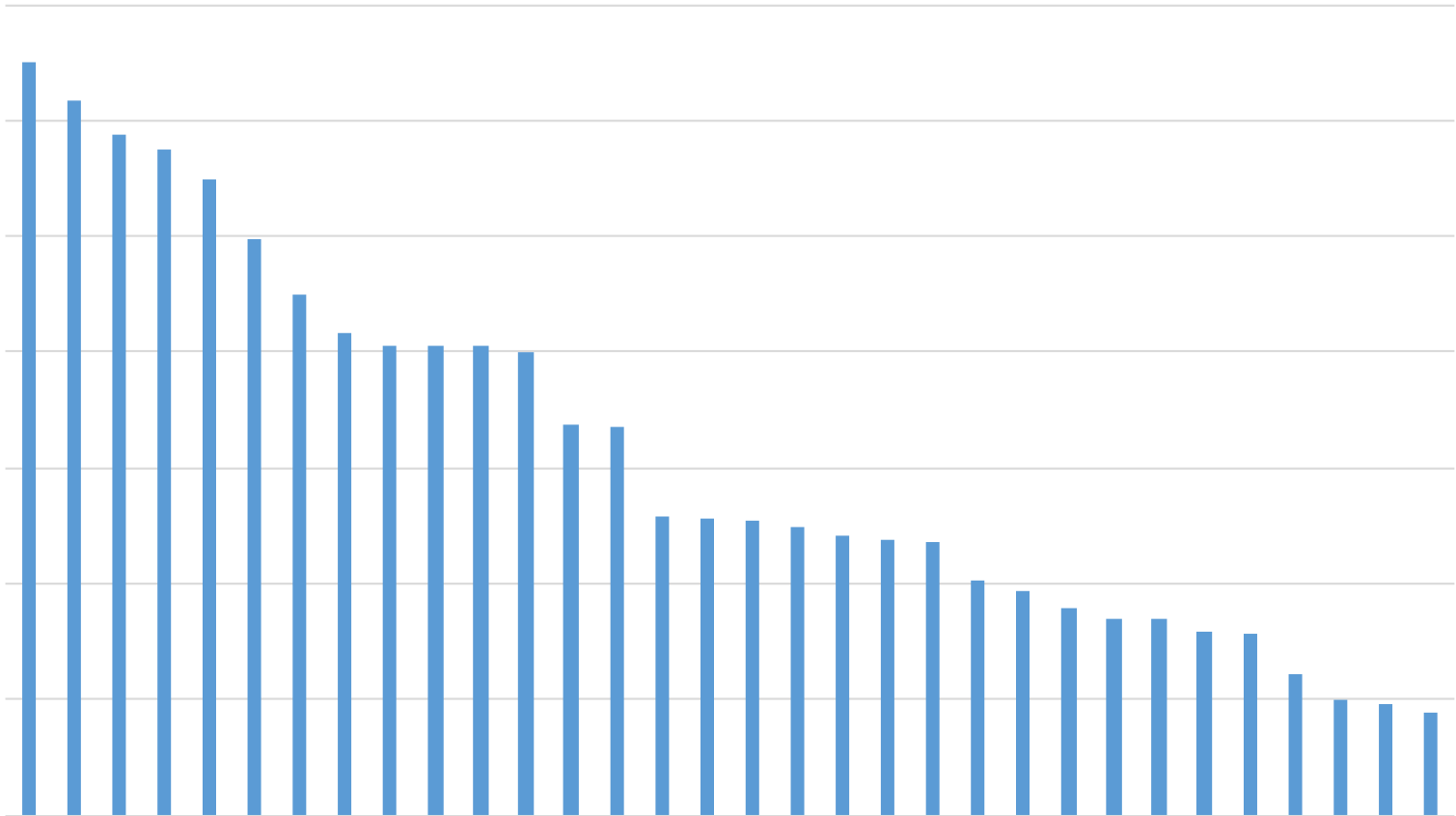
# Composition of current expenditure in public and private educational institutions (2015) - Tertiary education



Source: OECD / UIS / Eurostat (2018), Table C6.2. See Source section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

# Gross Domestic Expenditure on R&D (2016)

on R&D (GERD) as % of GDP (2016)

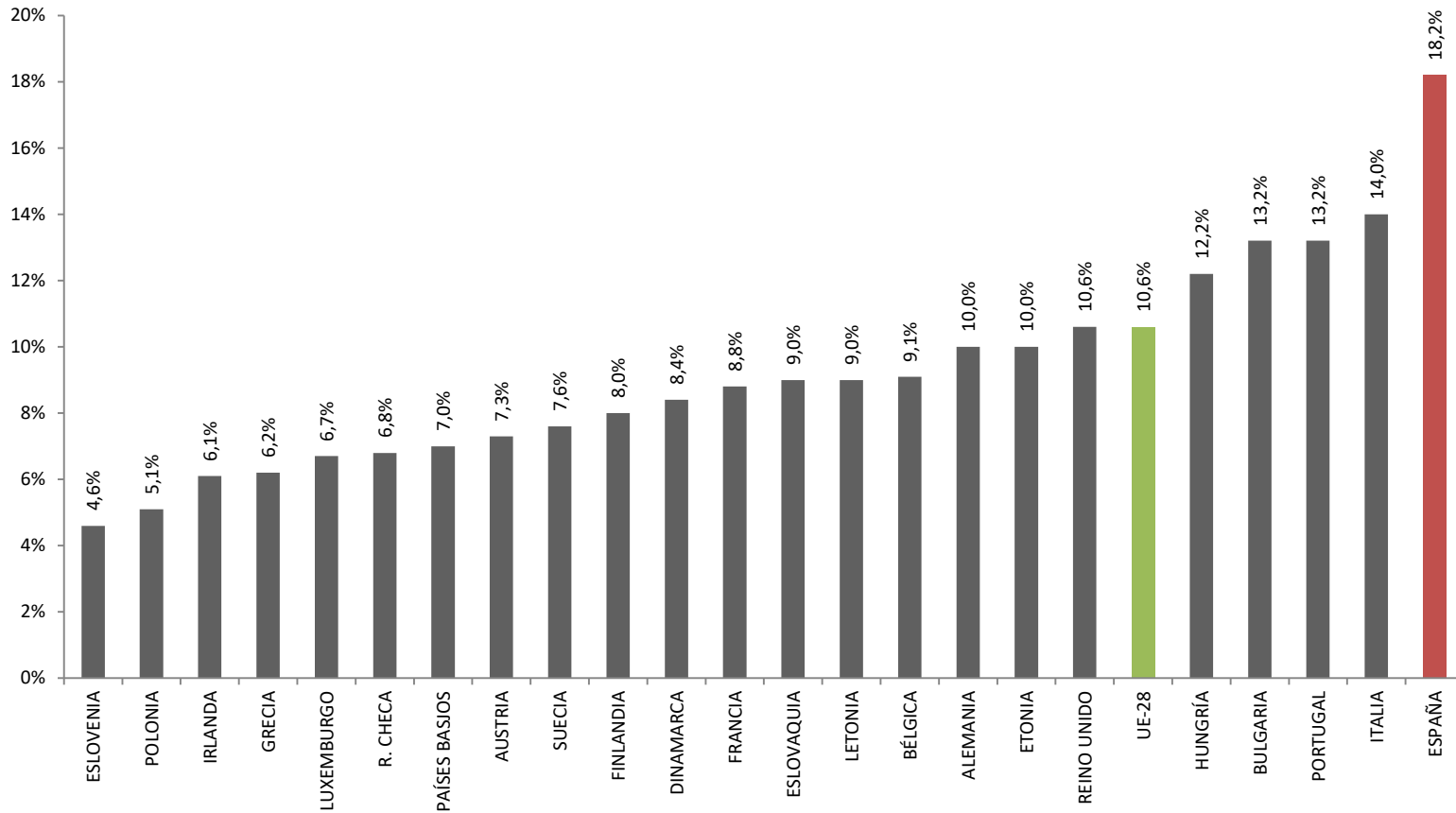




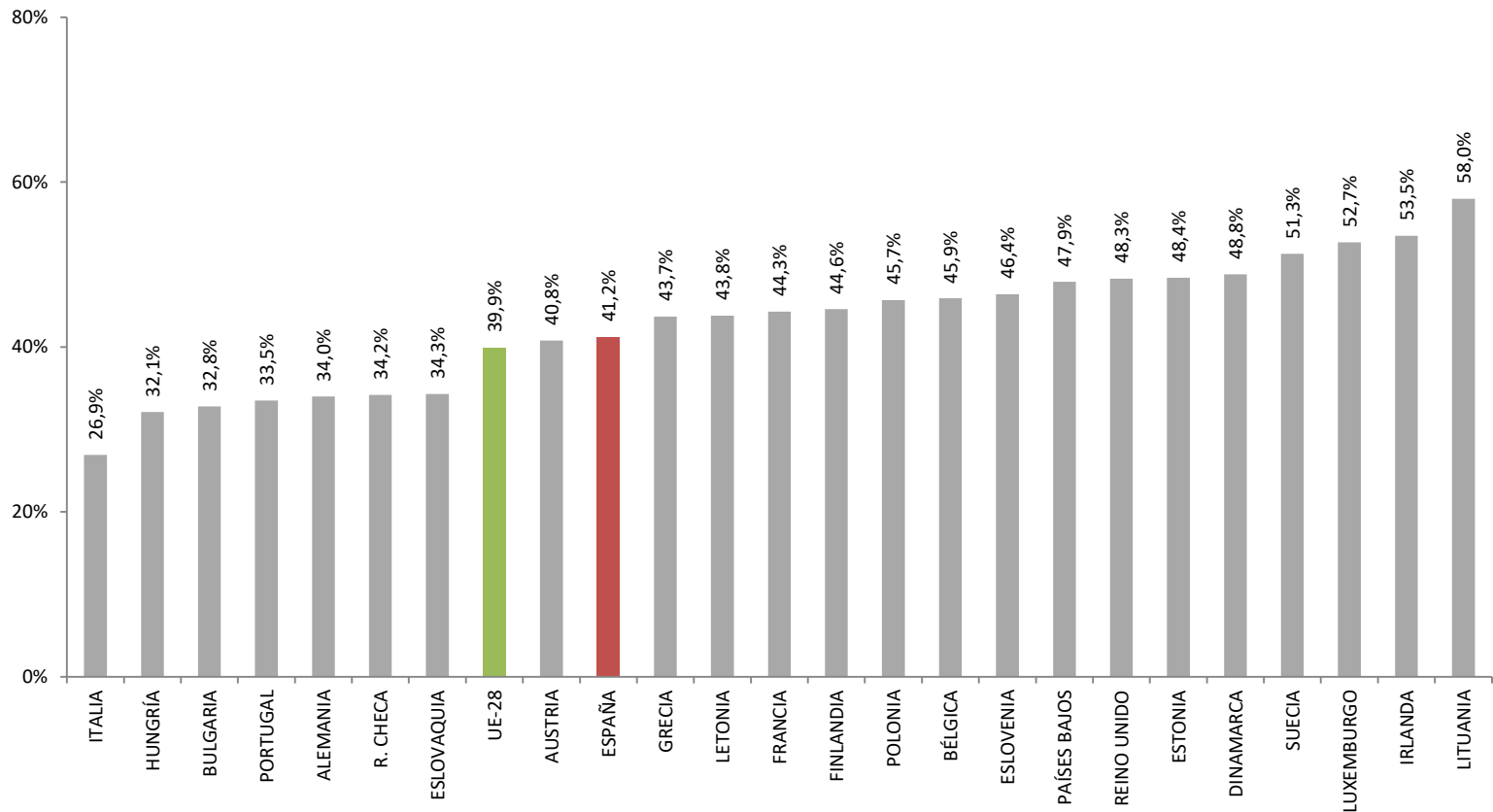
# Outputs and outcomes of investment in education

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# Early school leavers: Percentage of the population aged 18-24 with at most lower secondary education and no further education or training

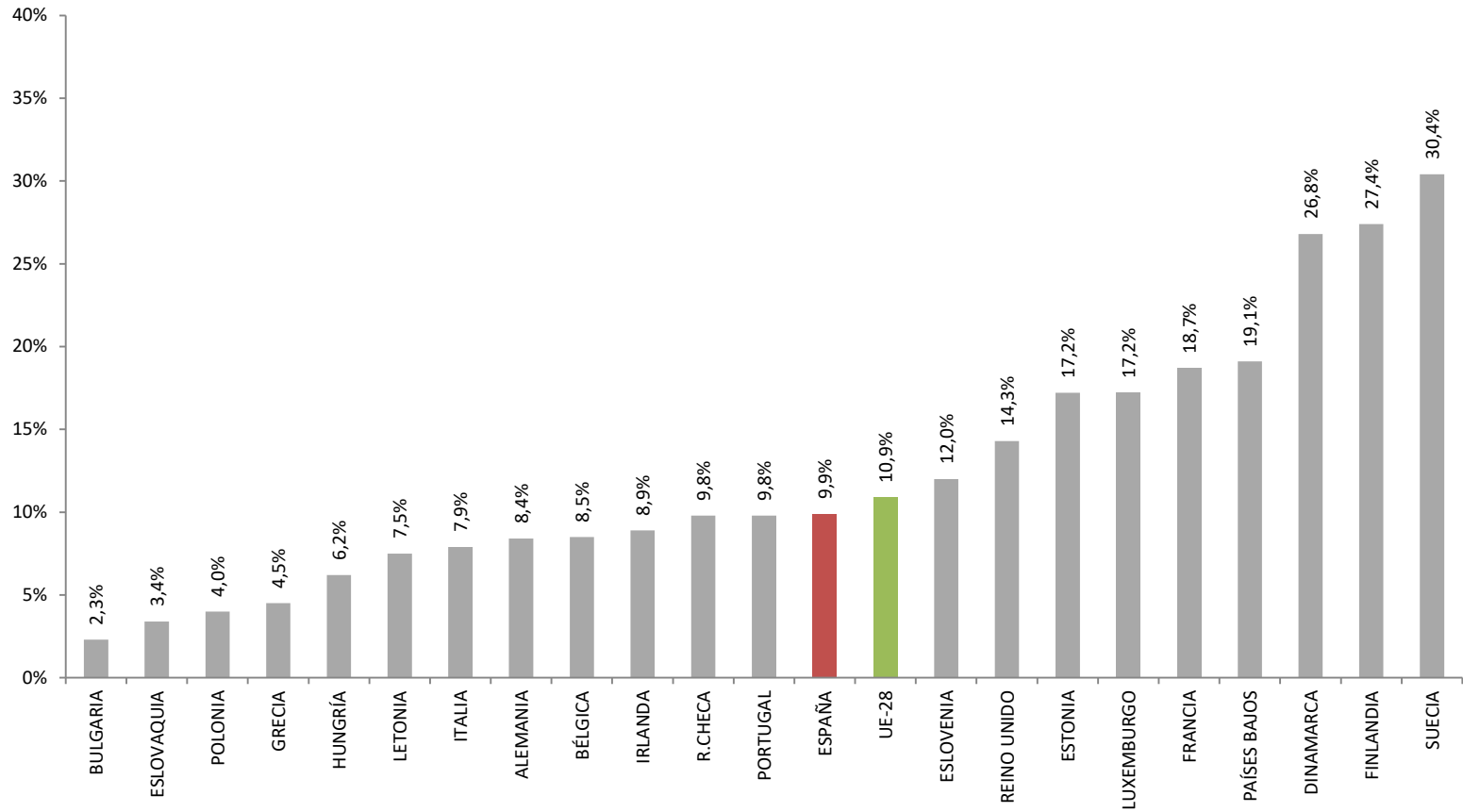


# Percentage of the population aged 30-34 who have successfully completed tertiary studies (2017)

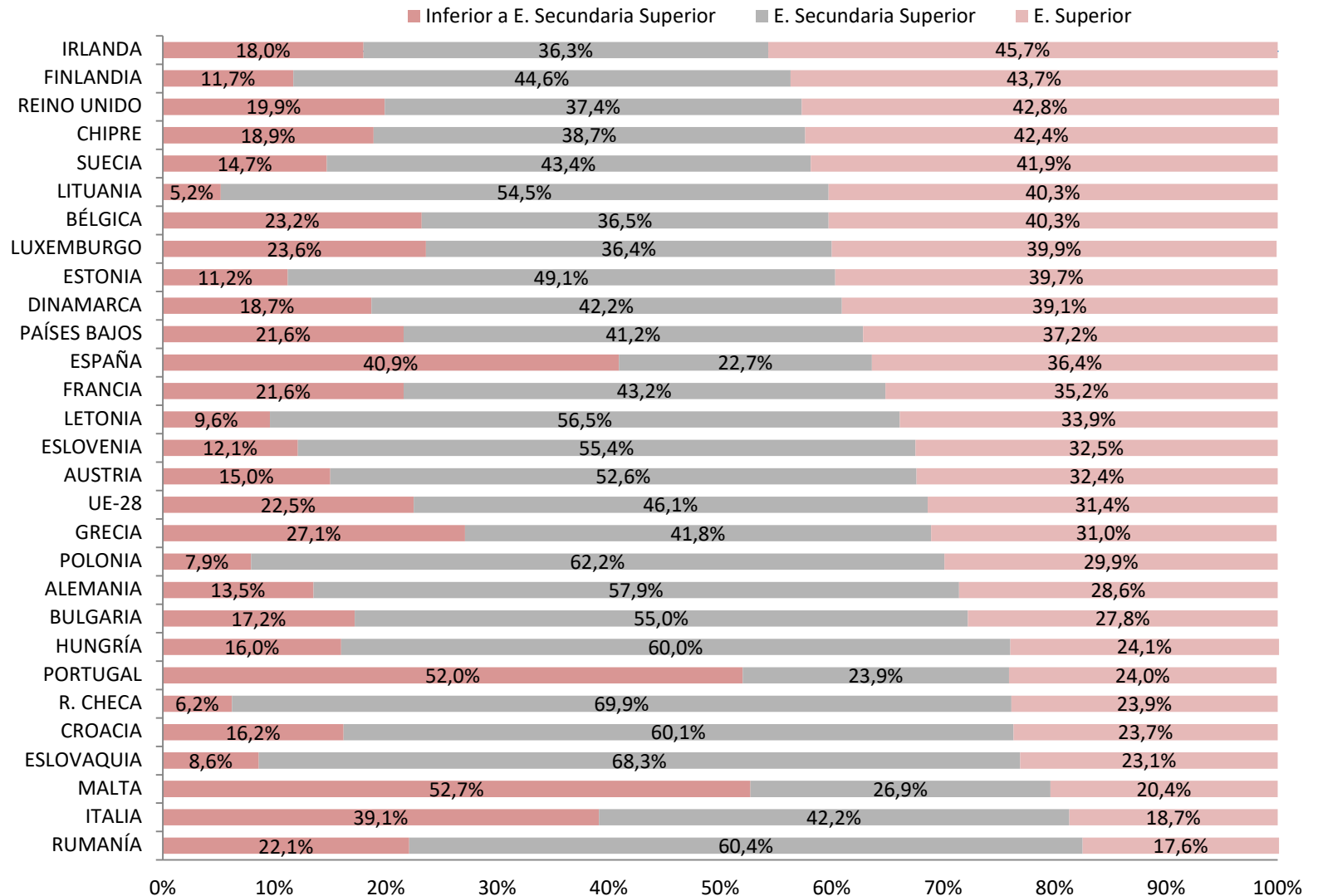




# Participation rate of population aged 25-64 in lifelong education and training



## Population aged 25-64 by educational attainment level. Año 2017. [edat\_lfse\_04]



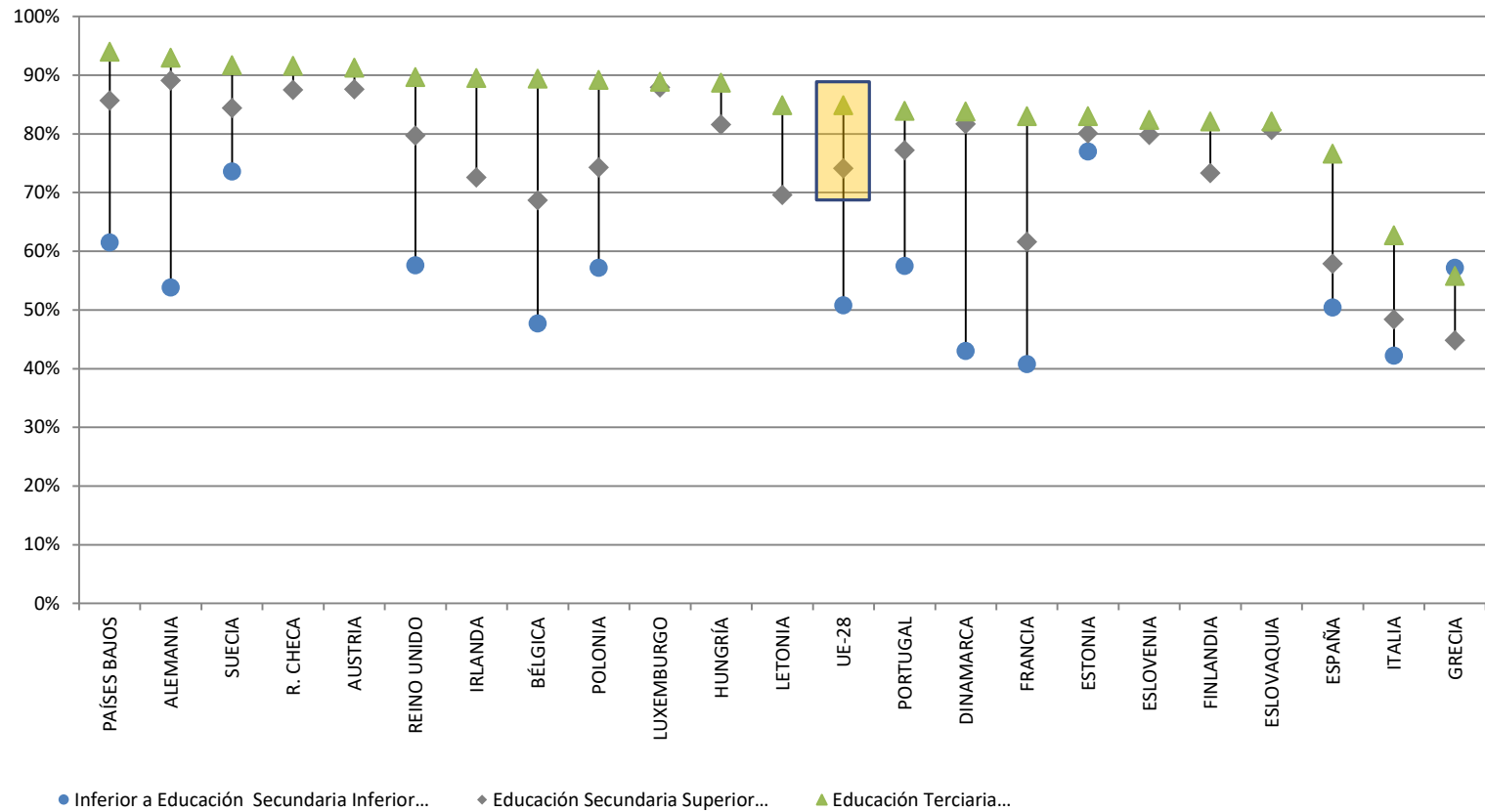
# Employment rates of 25-64 year-olds, by educational attainment (2017)

Source: Adapted with permission from OECD / UIS / Eurostat (2018)

**Table A3.1.**  
**Employment rates of 25-64 year-olds, by educational attainment (2017)**  
 Percentage of employed 25-64 year-olds among all 25-64 year-olds

	Notes	Upper secondary or post-secondary non-tertiary			Tertiary					All levels of education	
		Below upper secondary	Upper secondary	Post-secondary non-tertiary	Total	Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent		Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)
<b>OECD</b>											
Australia		59	77	83	78	82	85	84	89	84	77
Austria		54	76	81	77	86	80	89	92	86	76
Belgium		47	73	87	73	81	84	87	93	85	72
Canada		56	72	79	74	81	83	85	d	82	77
Chile	1	62	72	a	72	80	86	95	d	84	71
Czech Republic		51	82	d	82	88	81	87		92	86
Denmark		62	81	93	81	85	84	89	94	86	79
Estonia		65	79	78	79	81	84	88	94	86	80
Finland		53	73	c	74	82	84	87	97	85	76
France		53	73	66	73	84	84	88	90	85	73
Germany		60	80	86	82	90	88	88	93	89	81
Greece		50	58	63	59	63	71	83	85	72	61
Hungary		55	77	84	78	86	83	88	93	85	76
Iceland		77	88	95	90	89	92	95	98	93	88
Ireland		51	70	75	72	80	85	89	90	85	74
Israel		52	74	a	74	84	87	90	93	87	78
Italy		52	71	75	71	c	73	83	93	81	65
Japan	2	x(2)	79	d	x(5)	m	79	d	88	d	82
Korea		66	73	a	73	77	78	d	x(6)	x(6)	74
Latvia		61	73	73	73	86	86	90	98	88	76
Luxembourg		60	74	80	75	82	81	89	93	86	76
Mexico		65	71	a	71	70	80	87	89	80	69
Netherlands		61	80	84	80	87	88	91	95	89	79
New Zealand		73	80	87	83	88	89	88	93	89	83
Norway		61	79	85	80	82	90	93	95	89	80
Poland		42	69	73	70	67	85	89	98	88	73
Portugal		68	82	83	82	c	83	88	92	87	76
Slovak Republic		39	75	77	75	91	73	83	86	82	74
Slovenia		46	70	a	70	78	89	88	93	87	73
Spain		56	70	78	70	79	79	84	90	81	68
Sweden		67	87	83	86	85	90	92	93	89	84
Switzerland		67	82	d	x(2)	82	x(6,7,8)	88	d	92	83
Turkey		52	63	a	63	66	77	85	93	75	59
United Kingdom	3	63	83	a	81	82	86	86	88	85	80
United States		56	70	d	x(2)	78	82	85	90	82	74
<b>OECD average</b>		<b>58</b>	<b>75</b>	<b>80</b>	<b>76</b>	<b>81</b>	<b>84</b>	<b>88</b>	<b>92</b>	<b>85</b>	<b>76</b>
<b>EU22 average</b>		<b>55</b>	<b>75</b>	<b>79</b>	<b>76</b>	<b>82</b>	<b>83</b>	<b>87</b>	<b>92</b>	<b>85</b>	<b>75</b>
<b>Partners</b>											
Argentina	1	65	74	a	74	x(6)	85	d	x(6)	x(6)	73
Brazil		65	74	d	x(2)	74	x(9)	x(9)	x(9)	83	71
China		m	m	m	m	m	m	m	m	m	m
Colombia		72	75	d	x(2)	75	x(9)	x(9)	x(9)	83	75
Costa Rica		64	69	c	69	71	83	89	d	x(7)	69
India		m	m	m	m	m	m	m	m	m	m
Indonesia		73	74	m	74	78	87	94	98	85	75
Lithuania		52	71	77	73	a	90	91	94	91	79
Russian Federation	4	51	68	75	72	77	88	85	89	81	75
Saudi Arabia	5	60	65	a	65	x(6)	75	d	x(6)	75	65
South Africa		43	55	74	58	82	85	85	d	x(7)	56
<b>G20 average</b>		<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>m</b>
<b>OECD average incl. Lithuania</b>		<b>57</b>	<b>75</b>	<b>80</b>	<b>76</b>	<b>81</b>	<b>84</b>	<b>88</b>	<b>92</b>	<b>85</b>	<b>76</b>
<b>EU23 average incl. Lithuania</b>		<b>55</b>	<b>75</b>	<b>79</b>	<b>75</b>	<b>82</b>	<b>83</b>	<b>88</b>	<b>92</b>	<b>85</b>	<b>75</b>

## Employment rates of young people (20-34) by educational attainment level (2017)



# EFNE Final Remarks

- Although investment has gone down due to economic crises, a decrease in investment does not necessarily indicate worsened educational performance.
- Besides the level of investment, how resources are allocated is just as important as the amount of resources available to be allocated.
- Beyond the level of education, the qualifications and skills of the workforce should adapt to the demands of the knowledge society.
- The lack of investment in research and development in universities has negative effects on economic and social development. It is necessary to incentivize private investment.
- The employment rates of recent graduates have improved in most of the EU. A higher level of education offers the best employability.

- OECD (2018), Education at a Glance 2018: OECD indicators, OECD publishing, Paris. <<http://dx.Doi.Org/10.1787/eag-2018-en>>
- Education and Training. EU Monitor 2017
- Eurostat
- RUIZ, M.<sup>a</sup> Auxiliadora, Miguel Ángel Sancho y Mercedes de Esteban Villar. Indicadores Comentados Sobre el Estado del Sistema Educativo Español 2018. Madrid: Fundación Ramón Areces y Fundación Europea Sociedad y Educación, 2018.

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**EFSE**

José Abascal, 57, 5º B 28003 Madrid  
T 91 455 15 76 F 91 399 40 12  
[fundacion@sociedadyleducacion.org](mailto:fundacion@sociedadyleducacion.org)  
[www.sociedadyleducacion.org](http://www.sociedadyleducacion.org)

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